

COMPOSITE SOLID ELECTROLYTE

[71] Applicant: SHIN ETSU CHEM CO LTD

[72] Inventors: HIRAHARA KAZUHIRO;
ISHIHARA TOSHINOBU; ITO
KENICHI; NAKANISHI NOBORU

[21] Application No.: JP06181051

[22] Filed: 19940802

[43] Published: 19950425

[30] Priority: JP 05204197 19930818

[No drawing]

Go to Fulltext

[57] Abstract:

PURPOSE: To obtain a composite solid electrolyte, containing an inorganic salt and a specific organic solvent in a copolymer containing a block of polystyrenes having a graft chain of a polyoxyalkylene group, good in strength, ionic conductivity and moldability and useful as batteries or cells, etc. CONSTITUTION: This composite solid electrolyte is obtained by blending (A) a copolymer, having ≥ 310 polymerization degree and composed of at least one polymer block chain, comprising a recurring unit expressed by formula I [R^1 is H, methyl or ethyl; R^2 is H or methyl; R^3 is an alkyl, an aryl, an acyl, silyl or a cyanoalkyl; (n) is an integer of 1-100; the number-average molecular weight of the graft chain expressed by formula II is 45-4400] and having ≥ 10 polymerization degree, (B) at least one polymer block chain comprising a recurring unit expressed by formula III [R^4 is H, methyl or ethyl; M is vinyl, isopropenyl, a group expressed by the formula COOCH_3 or COOC_2H_5 or a (substituted)phenyl] and having ≥ 300 polymerization degree at (1:30) to (30:1) component ratio of the block chains (A):(B) with an inorganic salt and a cyclic carbonic acid ester-based organic solvent.

[51] Int'l Class: C08F28700 C08G06528 C08L05106 H01B00106
H01M00618